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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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BANNER & WITCOFF, LTD.
TEN SOUTH WACKER DRIVE
SUITE 3000
CHICAGO, IL 60606

EXAMINER	
STULII, VERA	

ART UNIT	PAPER NUMBER
1761	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,348	RAMSDEN, STEVE	
	Examiner	Art Unit	
	Vera Stulii	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-39 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-39 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 06/20/05.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 23, 33, and 35, the phrase "consisting essentially" renders the claim(s) indefinite. The metes and bounds of the term are not apparent, and are not clearly set forth in the specification.

Regarding claims 1, 23, 33, and 35, the phrase "in the presence of yeast" renders the claim(s) indefinite. It is not clear whether the yeast is required, or is the yeast an actual component.

Regarding claims 1, 23, 32-33, and 35, the phrase "allowing" renders the claim(s) indefinite. It is not clear how exactly fermentation (carbohydrate release) is being allowed to proceed.

Claims 1, 23, 32-33, and 35 are also rendered indefinite for the recitation of the phrase “more organoleptically neutral”. The metes and bounds of the term are not apparent, and are not clearly set forth in the specification.

Claims 1, 13, 29, 33 and 35 are also rendered indefinite for the recitation of the phrase “inactivating alcohol concentration”. The metes and bounds of the term are not apparent, and are not clearly set forth in the specification.

Claim 2 is rendered indefinite for the recitation of the phrase "removing yeast", since it is not clear how yeast could be removed if it was not used in the method of claim 1.

Claim 3 is rendered indefinite for the recitation of the phrase "yeast being removed". There is no recitation of active positive steps in the method.

Claim 4, 6, 25-26 are rendered indefinite for the recitation of the phrase "compromise flavor". It is not clear as to how the flavor could be compromised.

In claim 5, it is suggested to use present tense instead of past tense ("are removed").

Claim 36 recites the limitation "the alcohol content" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 14-15, 17-21, 23-25, 31, 35-37 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Witt, Jr. (US 4,073,947).

In regard to claim 1, 21, 23, 35 and 39, Whitt, Jr. discloses "a non-distilled beer-type beverage is produced from a wort prepared from the hydrolyzed starch" (Abstract). Whitt, Jr. also discloses carbohydrate profile of hydrolyzed (converted) starch: glucose—4.7%, maltose—57.5% and triose—12.6% (Col. 3 lines 57-64). Whitt, Jr. also

discloses use of yeast (Col. 2 lines 12-13). Whitt, Jr. also discloses protein hydrolyzate and a source of ammonium ion as a soluble nitrogenous yeast nutrient source (Col. 4 lines 45, 64-65). Whitt, Jr. also discloses soy flour (soy extract) as a protein hydrolyzate source (Col. 5-6 Table 1). Whitt, Jr. also discloses that produced beverage contains "about 7.5-7.6 percent alcohol by weight, which is considerably higher than conventional commercial beers" (Col. 8 lines 13-15). In regard to claims 35, 36 and 37, Whitt, Jr. discloses blending fermented beverage with relatively small amounts of conventional barley malt beers with which it is compatible (Col. 7 lines 59-63). Conventional barley malt beer serves as a flavoring agent. Since alcohol content of fermented beverage is initially higher than alcohol content of conventional beers (see above), the alcoholic content of the blend is decreased.

In regard to claims 2, 4, and 24-25, Whitt, Jr. discloses filtration to remove the yeast and prevent autolysis which may contribute to undesirable flavors in the beer (Col. 8 lines 9-11).

In regard to claims 10, 15 and 31, Whitt, Jr. discloses addition of enzyme (glucoamylase) to the wort to permit nearly complete fermentation (Col. 2 lines 57-60).

In regard to claim 10, Whitt, Jr. discloses that "[I]f more body is desired, however, one may stop the conversion of carbohydrate to fermentable sugars at any desired point to give more dextrins and less fermentable sugar than indicated in the specific process now to be described" (Col. 2 lines 66-68, Col. 3 lines 1-2).

In regard to claim 14, Whitt, Jr. disclose that "the starch hydrolyzate can have a dextrose equivalent value greater than 50, such higher values being attainable by the

use of alpha-1,6-glucosidase such as pullulanase and/or isoamylase in combination with beta-amylase if it is desired to increase maltose production" (Col. 2 lines 51-54).

In regard to claim 17, Whitt, Jr. discloses using beta-amylase (Col.3 lines 35-36).

In regard to claim 18, Whitt, Jr. discloses "a microbial, vegetable or animal protein hydrolyzate in an amount to provide about 0.10 to 0.50 milligram soluble nitrogen per milliliter" (Col.8 lines 62-65).

In regard to claim 19, Whitt, Jr. discloses that "[a] starch hydrolyzate having a dextrose equivalent (D.E.) value of less than 40 can be used if a beverage with more body is desired" (Col. 2 lines 46-49).

In regard to claim 20, Whitt, Jr. discloses "[t]he starch hydrolyzate useful in this invention generally has a dextrose equivalent value in the range of about 35 to 65" (Col. 2 lines 54-57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3, 10, 11-12, 16, 22, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Witt, Jr. (US 4,073,947).

Witt, Jr. is taken as cited above.

Witt, Jr. also discloses that "[I]f more body is desired, however, one may stop the conversion of carbohydrate to fermentable sugars at any desired point to give more dextrins and less fermentable sugar than indicated in the specific process now to be described" (Col. 2 lines 66-69, Col. 3 lines 1–2).

Witt, Jr. does not disclose that enzyme is present in an amount sufficient to sustain the level of fermentable carbohydrates in the fermentation mixture at a level of from 2-5% for at least 90% of the time of fermentation. One of the ordinary skill in the art would have been motivated to vary amount of enzyme in order to control duration of fermentation and achieve desired content of fermentable carbohydrates based on the desired body of the fermented beverage as taught by Whitt et al.

Witt, Jr. does not disclose said starch hydrolysate is a maltodextrin. However, Whitt, Jr. discloses providing more dextrins, than fermentable sugars if desired. One of the ordinary skill in the art would have been motivated to modify disclosure of Whitt, Jr. and employ maltodextrin in order to achieve desired body of the final fermented beverage as taught by Whitt, Jr. One of the ordinary skill in the art would also have been motivated to use various forms of starch hydrolysate either solid or liquid syrup.

Witt, Jr. does not disclose that "starch hydrolysate is present in an amount sufficient to allow fermentation to proceed to within 1% of the inactivating alcohol

concentration for said yeast" (claim 29). It is not clear what applicant means by "1% of the inactivating alcohol concentration for said yeast" (see Rejection under U.S.C. 112 2nd paragraph above), in any case it would have been obvious to vary relative amount of yeast/starch hydrolysate in order to control the process of fermentation.

Witt, Jr. does not disclose yeast being removed via centrifugation. However, Whitt, Jr. discloses filtration step in order to remove the yeast. Both centrifugation and filtration are well known methods of wort clarification. One of the ordinary skill in the art would have been motivated to modify invention of Whitt et al and employ both centrifugation and filtration in order to achieve better yeast removal.

Witt, Jr. does not disclose enzyme is a maltotriose-releasing enzyme. However, choice of enzyme would depend on the particular starch hydrolysate carbohydrate profile. One of the ordinary skill in the art would have been motivated to vary types of enzymes depending on the desired carbohydrate profile of hydrolyzate.

Witt, Jr. does not disclose diluting fermented beverage to an alcohol content of about 4% to about 6%. However, Witt, Jr. discloses blending fermented beverage with relatively small amounts of conventional barley malt beers with which it is compatible (Col. 7 lines 59-63). Since alcohol content of fermented beverage is initially higher than alcohol content of conventional beers (see above), the alcoholic content of the blend is decreased. One of the ordinary skill in the art would have been motivated to vary amount of conventional beer in order to achieve desired level of alcohol content, or organoleptical profile such as taste, aroma, etc.

Claims 5-7, 26, 32-34, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Witt, Jr. (US 4,073,947) in view of Draeger (US 2,206,719) and Dalgleish (US4,156,025).

Whitt, Jr. s taken as cited above.

Whitt, Jr. also disclose producing a non-distilled beer-type alcoholic beverage with reduction in or elimination of conventional wort constituents (Col. 1 lines 7-11).

Witt, Jr. does not disclose treating the fermented beverage with carbon, decolorizing beverage and substantially removing salts and organic acids which compromise flavor of the fermented beverage. Witt, Jr. does not disclose ion-exchange filtration of the fermented beverage.

Draeger disclose production of "fermented liquor having as its base a fermented solution but none of its original natural taste or odor" (Col. 1lines 4-7). Draeger discloses treating fermented solution with activated carbon "to remove substantially all of its original natural taste or odor" by adding carbon and the filtering (Col. 1 lines 18-22, Col. 3 lines 57-68). Draeger also discloses treating a fermented dextrose solution with activated carbon to produce "substantially tasteless extract" (Col. 4 Claim 2).

Dalgleish discloses a method of removing haze precursors from light beer, comprises contacting the beverage with an ion-exchange resin material in hydrogen form to remove at least nearly all haze precursors (Col. 1 lines 45-49, Col. 4 Claim 1).

Since Witt, Jr. et al discloses producing a non-distilled beer-type alcoholic beverage with reduction in or elimination of conventional wort constituents using starch hydrolysate, and Draeger discloses treating fermented solution with activated carbon "to

remove substantially all of its original natural taste or odor" by adding carbon and then filtering, one of the ordinary skill in the art would have been motivated to modify disclosure of Whitt, Jr. et al and to treat fermented beverage with carbon in order to further eliminate conventional wort constituents and characteristics such as taste, odor, and color. One of the ordinary skill in the art would have been motivated to further perform ion-exchange filtration as disclosed by Dalgleish in order to remove haze precursors from fermented beverage and obtain clear beverage. Since both Whitt, Jr. and Draeger teach further mixing with flavoring/coloring solutions, one of the ordinary skill in the art would have been motivated to perform both steps of carbon-treatment and ion-exchange filtration to obtain clear odorless, colorless beverage that may serve as a base for various alcoholic beverages.

Claims 8-9, 13 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Witt, Jr. (US 4,073,947) in view of Brewing Science.

Witt, Jr. does not disclose the yeast is a Saccharomyces yeast. Witt, Jr. does not disclose that "starch hydrolysate is present in an amount sufficient to allow fermentation to proceed to within 1% of the inactivating alcohol concentration for said yeast" (claim 13). It is not clear what applicant means by "1% of the inactivating alcohol concentration for said yeast" (see Rejection under U.S.C. 112 2nd paragraph above), in any case it would have been obvious to vary relative amount of yeast/starch hydrolysate in order to control the process of fermentation.

Brewing Science disclose that all modern brewing yeasts belong to one of two species and "even these two species are very similar to one another" (Volume 2 p. 3).

Brewing Science disclose that these two species are *Saccharomyces cerevisiae*, which is used in ale and stout fermentation, and *Saccharomyces carlsbergensis* used in lager brewing.

Since Witt, Jr. et al teach production of a non-distilled beer-type beverage, and Brewing Science teach that *Saccharomyces cerevisiae* is one of two yeast species used in brewing, one of the ordinary skill in the art would have been motivated to modify disclosure of Witt, Jr. that does not specify yeast used and to use *Saccharomyces cerevisiae* as the main source of yeast for brewing. One of the ordinary skill in the art would have been motivated to do so, since using *Saccharomyces cerevisiae* in brewing is a well established fact in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Stulii whose telephone number is (571) 272-3221. The examiner can normally be reached on 7:00 am-3:30 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vera Stulii V. Stulii

MILTON I. CANO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700